



**Subgroup on Innovation &  
Knowledge Exchange (SolKE)**  
**3<sup>rd</sup> meeting**

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# Thematic networks involving Operational Groups: OK-NET EcoFeed and BIOFRUITNET

Ambra De Simone  
IFOAM Organics Europe



# Thematic Networks involving Operational Groups

## Example of OK-NET-EcoFeed and BIOFRUITNET

Ambra De Simone, R&I project officer, IFOAM Organics Europe, 30/05/2023

# ONE VOICE FOR ORGANIC STAKEHOLDERS



## WHO WE REPRESENT

- IFOAM Organics Europe represents the entire organic food chain and beyond
- We count almost 200 members in 34 European countries
- Based on the IFOAM principles of organic agriculture:  
Health, Ecology, Fairness & Care

# RESEARCH AND INNOVATION UNIT

## Knowledge for organics

## Improving food and farming through research

Organic food and farming is knowledge intensive. As IFOAM Organics Europe:

- We connect organic actors
- Promote knowledge exchange to continue improving organic practices so they fully achieve organic's principles.
- We care for participatory research and translate research outcomes into recommendations for policymakers and practitioners.

### R&I Projects

Coordination 1 project (2022-2026)

Coordinated 3 projects (2015-2021)

Partners in more than 10 running projects



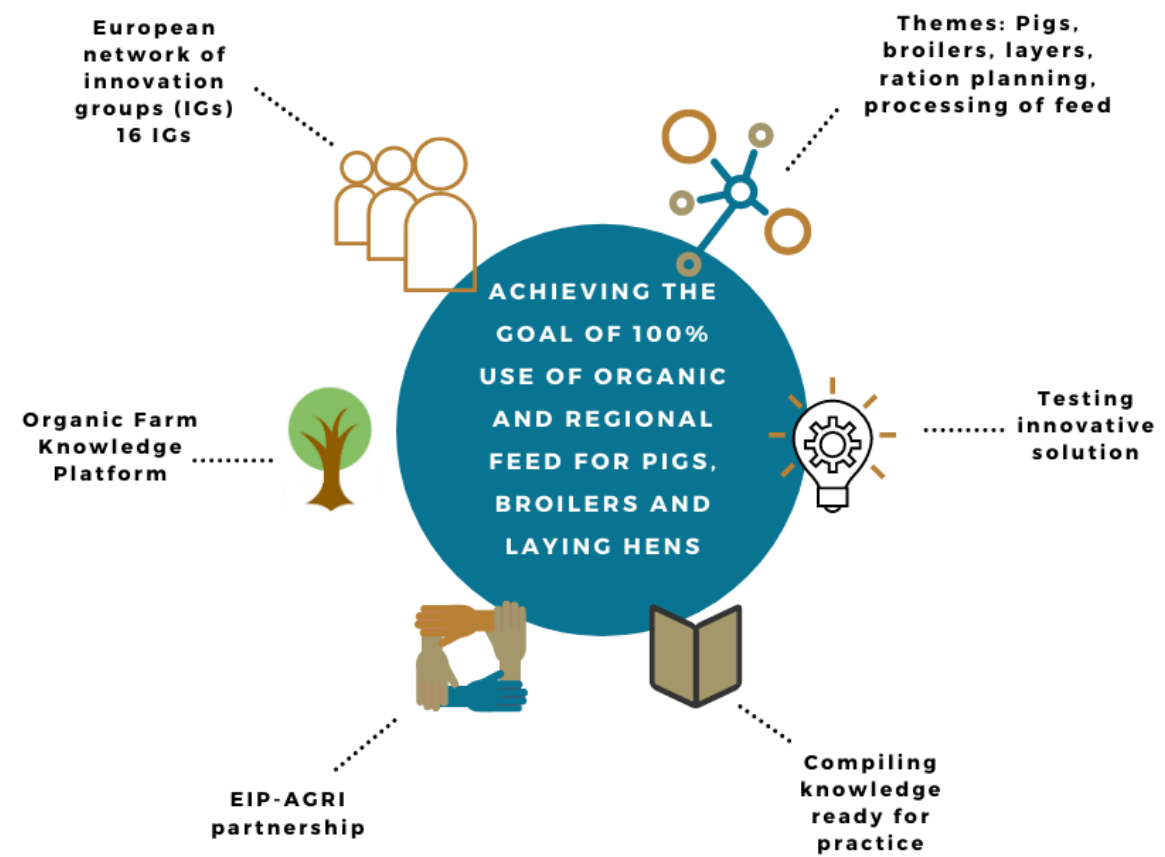



## Outline

- Thematic network OK-Net EcoFeed H2020 project
- Thematic network BIOFRUITNET H2020 project
- Organic Farm Knowledge platform

# Organic Knowledge Network on Monogastric Animal Feed (January 2018-March 2021)

- **Thematic Network**  
compiling knowledge  
ready for practice
- **Multi actor approach**  
throughout the project  
life cycle



 This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 773911.



# Example of testing: Foraging pigs, contribution of protein-rich fodder to finish pigs

On-farm trial of a system of outdoor fattening using various combinations of forage crops to reduce the amount of concentrate feed and improve the nutritional quality of the meat

- Farmer: Carl Shread
- Coordination: ITAB
- Technical expertise: Chamber of agriculture Pays de la Loire and Bio Direct



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# Dissemination towards end users (farmers and advisers)

## ➤ Dissemination through project partners:

- Organization of national innovation groups and European thematic groups meetings
- Webinar on ration planning tools
- News items and articles
- Joint conference with other H2020 projects (PPILOW, FreeBirds and POWER)

## ➤ EIP-AGRI Network:

- All practice abstracts and videos developed
- 8 articles for EIP-AGRI newsletter

## ➤ Operational groups:

- Project outcomes disseminated at national/regional level towards Operational Groups focus on organics (Ecovalia, Spain; Bioland Germany)
- SLU and FiBL members of the EIP-AGRI focus Group “New feed for pigs and poultry”

**OK NET ecofeed** **AIAB** **IFOM MARKING EUROPE MORE ORGANIC EU GROUP** PRACTICE ABSTRACT

**98 Practice abstracts**

**Dry forages: Process and t...**

**Problem**  
Forage storage and quality are affected by the percentage of water contained in the plants. A high water content encourages the formation of mould and indigestible compounds from, a reaction between sugar and amino acids (Maillard reaction) and brown forage. Enzyme processes can also modify forage quality due to plant respiration after cutting. A decrease in forage quality is also due to weather conditions during haymaking.

**Solution**  
Increases in forage quality with quality...

**Benefits**  
The drying process preserves forage quality and increases protein and energy content. To improve the process, a conditioner can be attached to the mower where the grass is crushed between two rollers. Crushing the stems can speed-up the on field drying process, reduce nutrient losses and, if the drying process is completed in a hay dryer, reduce the energy consumption.

**Geographical coverage**  
Global

**Application time**  
Growing and harvesting time

**Required time**  
A few days of dry and sunny weather

**Period of impact**  
October – June

**22 Videos**

**16 translated tools**

**Ration planning tool**

**Figure 1: Rowing hay with a tedder. Photo courtesy of John Deere** **Figure 2: Cutting forage. Photo courtesy of New Holland Deere**

**Practical recommendation**

- To obtain the best forage quality, cutting at the correct time is important, when cellulose and lignin is not too high. During spring, cutting early is the best option to preserve forage quality; for grasses the correct time is beginning of heading; for leguminous plants, it is beginning of blooming. However, cutting increases dry matter (DM) content, which speeds up the drying process. Favourable we...



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# Thematic Network compiling knowledge ready for practice

## Boosting Innovation in Organic Fruit production through strong knowledge networks

### Objectives

- 🍏 Support the competitiveness of organic fruit growing in the EU and beyond
- 🍏 Bridge the technical and knowledge gaps between science and practice
- 🍏 Identify the best practices and foster their adoption among EU fruit growers
- 🍏 Reinforce existing networks to ensure the flow of information for sharing knowledge on organic fruit production



# Multi actor approach throughout the project life cycle

## Stronger networks

Mapped 53 organic fruit growing networks in European and Mediterranean countries bringing together farmers, advisers, researchers, breeders, certifiers and marketing organizations with common technical areas of interest.

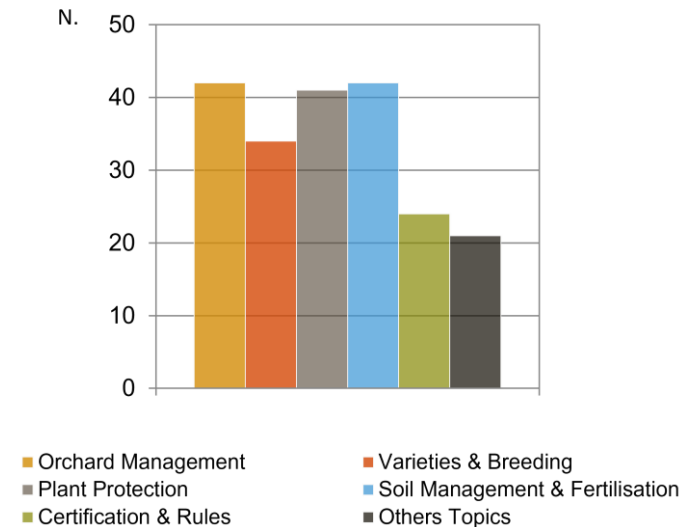
## Critical needs and ready-for-practice solutions:

- Collected more than 300 materials ready-for-practice and 1200 scientific papers
- Survey with **250 fruits growers and advisors in 26 countries** to collect information about orchard management practices applied in pome, stone and citrus fruits (e.g., plant protection, soil fertilisation, biodiversity management, variety selection, etc) and the respective knowledge needs

## Multi-Actor evaluation of the collected existing practical knowledge and gaps

Three “fruit panels”. Each included practitioners (including SMEs), advisors, and researchers and professionals coming from different parts of the organic fruit growing value chain





## Technical areas of interest



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# Innovative solutions for end users (farmers and advisers)

 Compile, translate and disseminate the knowledge across Europe

- 100  Practice abstracts
- 33  Videos
- 5  Podcasts
- 3  E-learning
- 8  Field days



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# Example of innovative solution in easy-to-read format for end users



## PRACTICE ABSTRACT

### Vibrations to manipulate pest behaviours: new frontiers in pest control

#### Problem

Many insect pests do not (or partially) rely on odours for finding a mate, so pheromones and other chemical stimuli are ineffective for their management.

#### Solution

Vibrational signals (VS) play a crucial role in the mating of these species and can provide effective and sustainable control strategies to manipulate pest behaviours.

#### Benefits

The use of VS for pest control reduce pest populations, are safe (for humans and ecosystems) and are well-accepted by consumers.

#### Practical recommendation

- VS can be used to manipulate pest behaviours such as landing on the plant, mating, and feeding (Picture 1). Moreover, VS do not harm beneficial insects as they are tailored to a specific pest.
- VS mating disruption is a feasible control against grapevine leafhoppers, given that trellis systems are excellent for transmitting vibrations.
- VS can be applied within any crop by installing poles and wires connected to the VS exciter and a solar panel as an energy source (Picture 2).
- Novel VS pest control strategies for citrus groves are under development at CIHEAM Bari. VS are transmitted to plants by wires to reduce mating and settling of the whitefly pest *Alerocanthus spiniferus*.
- A VS trap is under development for monitoring the stinkbug *Halyomorpha halys* within economically important fruit groves (i.e., apple, pear and nut orchards). The device only needs to be placed in strategic spots in the field and will soon be available on the market.
- VS devices can be set up in the orchard either *de novo* or by adjusting the system according to farmers' needs.
- Vibrational devices will soon be integrated into the farmers' toolbox for pest control, providing sustainable control techniques compatible with other organic approaches (i.e., biocontrol agents). Indeed, farmers should stay tuned and keep in contact with VS pest control providers.

#### Applicability box

##### Theme

Crop production, environment and society

##### Context

Global, Mediterranean basin

##### Application time

During the cropping season but may depend on the species and scenario

##### Required time

From six months to one year

##### Period of impact

Less than one year

##### Equipment

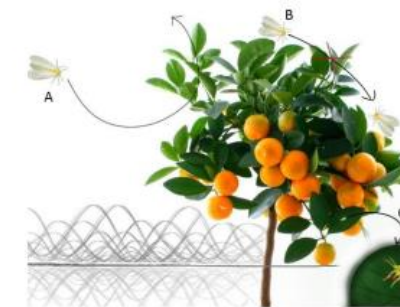
Vibrational devices (i.e., piezo-buzzers, metal wires, exciters, trellis systems, etc.)

##### Best in

Cropping systems ravaged by pests communicating by means of vibrations (i.e., hemipterans but not exclusively)



## PRACTICE ABSTRACT



**Picture 1:** Vibrational approaches for pest management. A) VS to reduce pest landing and permanence on the plant; B) vibrational mating disruption; C) vibrational disruption of feeding behaviours. Credit: Sabina Avosani, CIHEAM Bari.



**Picture 2:** A) Device transmitting VS along the vibrational vineyard set in northern Italy to control grapevine leafhoppers; B) Solar panels providing energy to the vibrational devices. Credit: Fondazione Edmund Mach and Biogard® (Italy).

#### Further information

##### Further reading

- Polajnar, J., Eriksson, A., Lucchi, A., Anfora, G., Virant-Doberlet, M. and Mazzoni, V. (2015). Manipulating behaviour with substrate-borne vibrations – potential for insect pest control. *Pest. Manag. Sci.*, 71: 15-23. <https://doi.org/10.1002/ps.3848>

##### Weblinks

- Check the [Organic Farm Knowledge](#) platform for more practical recommendations.
- [Vibrational mating disruption](#) for grape leafhoppers control. AGRO electronics.

#### About this practice abstract and CIHEAM Bari

**Publisher:** CIHEAM Bari  
**Address:** Via Ceglie 9 – 70010 Valenzano (BA) - ITALY  
**Phone:** +39 080 4606259  
**Website:** [www.iamb.it](http://www.iamb.it)  
**Authors:** Sabina Avosani, Vincenzo Verrastro  
**Contact:** [avosani@iamb.it](mailto:avosani@iamb.it)

**Review:** Ambra De Simone (IFOAM Organics Europe), Lauren Dietsmann (FiBL)  
**Permalink:** [Organic-farmknowledge.org/tool/43572](https://organic-farmknowledge.org/tool/43572)  
**Project website:** <https://biofruitnet.eu>  
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**BIOFRUITNET**  
Boosting Innovation in ORGANIC FRUIT  
production through stronger networks

# Dissemination towards end users (farmers and advisers)

- Dissemination through project partners:
  - Organization of national events (e.g., National Agricultural Advisory Centre in Poland)
  - e-learning course we organized in Spanish, Italian, French and German
  - Final technical conference
- EIP-AGRI/EU CAP Network:
  - 100 practice abstracts in English, 130 practice abstracts translated in national languages and 25 videos
  - Direct contact as key multiplier
- Operational groups:
  - Project outcomes disseminated at national/regional level focus on organics (In France "Mediterranean Agroforestry Systems" and DEPASSE dealing with animals in orchards; Italian partner is the scientific responsible of OLTREBIO project)



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# What is Organic Farm Knowledge?



- Built within the thematic network OK-Net Arable
- Further developed with OK-Net EcoFeed and BIOFRUTINET
- More than 20 H2020 and TNs projects feeding solutions for farmers and advisers
- Provides access to about 1000 tools and resources about organic farming
- A virtual meeting place for cross-border learning for farmers and farm advisors in Europe

## Features

- Six themes
- Extended toolbox for searching tools
- News section linked to social media
- Calendar of key events
- Monthly newsletter
- A directory of national advisory services
- Discussion forum
- Translation into 13 European languages

The screenshot shows the homepage of the Organic Farm Knowledge website. At the top left is the logo, which includes a stylized tree and a cow. To the right of the logo is a navigation menu with links for SEARCH TOOLBOX, SERVICES, THEMES & DISCUSSION, ABOUT, INTRANET, and CONTACT/SITE INFO. Below the navigation is a green banner with the text "Exchange knowledge, enhance organic farming". Underneath the banner is a large image of a cow's face with a search bar overlaid that says "Search the toolbox". Below the image is a grid of six navigation buttons: Crop production, Animal husbandry, Soil, Food chain management, Environment and society, and Farm management. Below the grid is a "News" section with three article previews. The first article is dated April 29, 2021, and is about species mixtures for lentil production in Germany. The second is dated April 26, 2021, and is about the expansion of the Organic Farm Knowledge Platform. The third is dated April 27, 2021, and is about wheat-lentil in South-West France. To the right of the news section is a green box for the "Organic Farm Knowledge newsletter" with a logo and a subscribe button. At the bottom right, there is a section for "Events".

Organic Farm Knowledge

SEARCH TOOLBOX SERVICES THEMES & DISCUSSION ABOUT INTRANET CONTACT/SITE INFO

Home

Exchange knowledge, enhance organic farming

Search the toolbox

Crop production >	Animal husbandry >	Soil >
Food chain management >	Environment and society >	Farm management >

News

April 29, 2021  
Species mixtures for lentil production in Germany - new tool  
Intercropping lentil with oat to increase harvest efficiency, suppress weeds, and efficient...

April 26, 2021  
Organic Farm Knowledge Platform expansion  
The Organic Farm Knowledge Platform provides practical information for organic farmers

April 27, 2021  
Wheat-lentil in South-West France - new tool  
Lentil, an important crop known for its nutritional values and taste, is sensitive to lodging...

Organic Farm Knowledge newsletter  
Subscribe to our Organic Farm Knowledge newsletter!

Events

The background is a solid green color with a repeating pattern of various organic food icons in a lighter shade of green. The icons include vegetables like carrots, tomatoes, mushrooms, and leafy greens; fruits like apples, strawberries, and raspberries; grains like bread and muffins; and animal products like cows, sheep, ducks, and fish. The text 'Thank you!' is centered in a large, bold, dark green font.

# Thank you!

Contact me: [ambra.desimone@organicseurope.bio](mailto:ambra.desimone@organicseurope.bio)



# Subgroup on Innovation and Knowledge Exchange (SolKE)

3rd meeting  
30 May 2023

All results and presentations are available on the event webpage:  
<https://eu-cap-network.ec.europa.eu/events/subgroup-innovation-and-knowledge-exchange-soike-0>

